



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,453	01/08/2001	Richard Bolling	ADO 0069 PA	5555

7590 03/18/2004

Killworth, Gottman, Hagan & Schaeff, L.L.P.
One Dayton Centre, Suite 500
Dayton, OH 45402-2023

EXAMINER

BISSETT, MELANIE D

ART UNIT PAPER NUMBER

1711

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/756,453

Applicant(s)

BOLLING ET AL.

Examiner

Melanie D. Bissett

Art Unit

1711

eb

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15,17-19,21-24 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15,17-19,21-24 and 26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 11/03
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1711

1. The rejections based on 35 USC 112 have been withdrawn based on the applicant's amendments. The rejections based on 35 USC 102 and 103 have been altered in the present rejection.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 15, 18-19, 21-24, and 26-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al. '701 or Johnson et al. '589. The '589 reference can be found on the applications Form PTO-1449 dated 11/5/03.
4. The references both teach sheets for sealing gaps, where a material is heated to a melting point for filling gaps and concealing defects (figures; '589, col. 4, lines 3-19; '701, col. 3 line 66-col. 4 line 14). A second melt-flowable layer may be adhered to a surface of the original melt-flowable layer, where the second layer comprises blowing agents, foaming agents, or other expandable materials ('589, col. 15, lines 31-45; '701, col. 15, lines 38-58). The second layers have different melt flow properties, where the references exemplify the second layer having greater melt flow properties such that the second layer flows before the original layer ('589, col. 16, lines 1-7; '701, col. 17, lines 51-57). The references teach a number of materials useful as melt-flowable layers, indicating melt temperatures as low as 50 °C ('589, col. 5 line 61-col. 6 line 6; '701, col. 5, lines 55-67). Thus, the layers are capable of flow at higher temperatures. Note that claim 21 is drawn to an intended future use of the claimed combination. The layers may

Art Unit: 1711

be co-extruded or coated to form sheets ('589, col. 6, lines 49-65; '701, col. 6, lines 43-59). In this case, the original layer would inherently act as a flow control layer, since it remains solid at the point where the second layers flow. Also, since the original layer would remain solid while the second layer melts, the second layer would inherently exhibit less sagging than it would without a solid layer attached to its surface. Thus, the references teach a combination of a heat activated expandable sheet (second layer) and a flow control agent on its surface (original layer). Note that the second layers are capable of melting and flowing into a gap or cavity; thus, they meet the intended use limitations of the claims.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 15, 17-19, 21-24, 26-27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Johnson et al. '579 or Johnson et al. '701, each in view of Greenwood.
7. The references both teach sheets for sealing gaps, where a material is heated to a melting point for filling gaps and concealing defects (figures; '589, col. 4, lines 3-19; '701, col. 3 line 66-col. 4 line 14). The references teach a number of materials useful as melt-flowable layers, indicating melt temperatures as low as 50 °C ('589, col. 5 line 61-col. 6 line 6; '701, col. 5, lines 55-67). Thus, the layers are capable of flow at higher temperatures. Note that claim 21 is drawn to an intended further use of the claimed

Art Unit: 1711

combination. The layers may be extruded ('589, col. 6, lines 49-65; '701, col. 6, lines 43-59). The references teach the application of web or scrim layers between two melt-flowable layers as flow control layers ('589, col. 15, lines 46-54; '701, col. 15, lines 59-67). Thus, the web or scrim layers would be on the surface of two melt-flowable layers. Also, the reference teaches the application of thermoplastic films that are dimensionally stable at the processing temperature ('589, col. 6, lines 49-65; '701, col. 6, lines 43-59). Second layers may be extruded or coated. Since the web, scrim, or thermoplastic film layer would remain solid while the melt-flowable layer melts, the melt-flowable layer would inherently exhibit less sagging than it would without a solid layer attached to its surface. However, the references do not seem to indicate that the original melt-flowable layers are expandable.

8. Greenwood teaches sealant compositions having a binder resin and volatile blowing agent-containing microspheres (abstract). The sealing compositions are formed into sealing tapes, useful in the automotive industry, where foamable sealant tapes allow for easier gap filling than non-foamable sealants due to the expandable nature of the composition (col. 1 lines 23-40; col. 3 line 62-col. 4 line 7). Heating causes the microspheres to expand the composition to fill the gaps. Since the Johnson references are also drawn to sealant tapes for filling gaps, it is the examiner's position that it would have been prima facie obvious to use blowing agents in the melt-flowable layers of the Johnson inventions to allow for expansion of the flowing resins. Motivation for this addition would have been to aid in the filling of the gaps by allowing for expansion.

Art Unit: 1711

9. Regarding the polyvinyl acetate layers, the Johnson references teach that PSA layers may be applied to the melt-flowable layer, where the melt-flowable layer flows at least to the edges of the PSA layer ('589, col. 16, lines 8-15; '701, col. 17, lines 58-65). Thus, the melt-flowable layer has a higher melt flow rate than the PSA layer, and so the PSA layer inherently acts as a flow control layer. The combination formed as such is capable of melting and flowing into a gap or cavity. Among the PSA compositions useful in the invention, vinyl acetate PSA's are noted ('589, col. 16, lines 16-30; '701, col. 17 line 66-col. 18 line 13). The PSA materials are extruded or coated onto the melt-flowable layers to form a dry coating. It is the examiner's position that it would have been prima facie obvious to choose a vinyl acetate PSA layer to be applied to an expandable melt flowable layer to form a sheet capable of being positioned on a surface prior to heating.

10. Claims 28-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Johnson et al. '589 or Johnson et al. '701, each in view of Delle Donne et al.

11. The Johnson references apply as above for a melt-flowable layer combination in the form of a sheet; however, the references do not mention the layers in thermoformed articles. Delle Donne teaches a heat reactive patch for sealing gage and drain holes in automobile bodies, where the patches are shaped into different articles, inserted into a drain or gage hole, and heated to further thermoform to the cavity (abstract; col. 3, lines 1-23). Sheets of thermoplastic material are thermoformed into different shapes for covering holes, where the thermoforming allows the sheets to take the general form of

the holes to be filled for better coverage (col. 9 lines 1-6). Since the Johnson references are drawn to heat activated sheets for filling cavities, it is the examiner's position that it would have been prima facie obvious to form these sheets into thermoformed parts to cover holes of various shapes. The parts would inherently be considered "pocket sealers" since they would be functional for sealing holes in automotive bodies.

12. Claims 28-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Johnson et al. '579 or Johnson et al. '701, each in view of Greenwood as applied to claims 15, 17-19, 21-24, 26-27, and 30 above, and further in view of Delle Donne et al.

13. The Johnson and Greenwood references apply as above for a melt-flowable layer combination in the form of a sheet; however, the references do not mention the layers in thermoformed articles. Delle Donne teaches a heat reactive patch for sealing gage and drain holes in automobile bodies, where the patches are shaped into different articles, inserted into a drain or gage hole, and heated to further thermoform to the cavity (abstract; col. 3, lines 1-23). Sheets of thermoplastic material are thermoformed into different shapes for covering holes, where the thermoforming allows the sheets to take the general form of the holes to be filled for better coverage (col. 9 lines 1-6). Since the Johnson references are drawn to heat activated sheets for filling cavities, it is the examiner's position that it would have been prima facie obvious to form these sheets into thermoformed parts to cover holes of various shapes. The parts would

inherently be considered "pocket sealers" since they would be functional for sealing holes in automotive bodies.

Double Patenting

14. Applicant is advised that should claim 26 be found allowable, claim 22 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Response to Arguments

15. In response to the applicant's arguments that Johnson teaches a second melt flowable layer, optionally comprising blowing agents, on the top of the original melt flowable layer, it is noted that the claims are drawn to a combination of two materials. The relationship between the layers and a substrate is irrelevant, since a substrate is not claimed and since a specific relationship between the layers and a substrate is not claimed. It is the examiner's position that the Johnson references teach film structures having two melt flowable layers, where one layer has a higher melt flow rate than the other. Because the materials are capable of flow and because the references teach the materials as filling gaps and cavities, it is the examiner's position that the combinations

taught by Johnson inherently meet the applicant's intended use of flowing into a gap or cavity.

16. Regarding the applicant's arguments that Johnson does not teach a heat activated expandable sealant, the rejections have been altered to show this expandable sealant. It is the examiner's position that the reference teaches an expandable second melt flowable layer and that it would be obvious to include blowing agents in the first melt flowable layer. In either case, the result is a heat activated expandable sealant layer. As stated above, the relationship between the layers and the substrate (top or bottom) is irrelevant in regards to the present claims.

17. In response to the applicant's arguments that there is no motivation to add a blowing agent into the first layer of Johnson's invention, it is noted that Greenwood teaches similar articles. Both references teach sealing tapes having melt flowable sealing layers. Greenwood specifically teaches that blowing agents aid in the filling of gaps due to the expansion of the materials. The Johnson references are concerned with the filling of gaps in certain applications. Thus, it is the examiner's position that the motivation for incorporating blowing agents into melt flowable sealant materials is clear from the Greenwood reference.

18. Regarding the applicant's arguments that Johnson does not teach a flow control agent on the surface of the sealant layer, it is the examiner's position that the Johnson references teach just that. The references teach the use of web, scrim, thermoplastic film, and PSA layers, all of which meet the term "flow control agent". Each has been indicated as having a lower melt flow rate than the melt flowable layer, and each has

Art Unit: 1711


been indicated as a layer adjacent to the melt flowable layer. Although the web or scrim layer is preferred to be between two melt flowable layers, the web or scrim layer would still contact the surface of two melt flowable layers. Thus, the "surface" limitation does not provide a patentable step over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdb


James J. Seidleck
Supervisory Patent Examiner
Technology Center